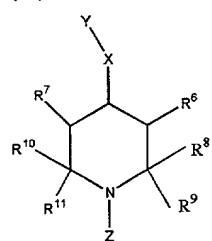


Claims

- [c1] 1. A multilayer composition, comprising
an upper layer comprising
a polymer system consisting essentially of a cycloaliphatic polyester resin, and
an additive composition comprising a hindered amine light stabilizer and a low
volatility, hydroxyphenyl-triazine or -pyrimidine UV absorber;
an intermediate layer comprising
a polymer system consisting essentially of a cycloaliphatic polyester, and
optionally,
an additive composition comprising TiO_2 , dyes, pigments, special effects
additives, or a combination comprising at least one of the foregoing; and
a polymeric substrate, wherein said intermediate layer is disposed between and in
intimate contact with said upper layer and said substrate.
- [c2] 2. The composition of claim 1, wherein said cycloaliphatic polyester has recurring
units of the formula:
-
- wherein R^1 is an alkyl or cycloaliphatic radical preferably having from 2 to about 12 carbon atoms, and R^2 is an alkyl or a cycloaliphatic radical, provided that at least one of R^1 or R^2 is a cycloalkyl group.
- [c3] 3. The composition of claim 2, wherein R^1 and R^2 is each a cyclohexylidene.
- [c4] 4. The composition of claim 1, wherein said hindered amine light stabilizer
comprises a substituted piperidine moiety or an oligomer substituted piperidine
moiety.
- [c5] 5. The composition of claim 4, wherein said hindered amine light stabilizer is a 4-
piperidinol derivative having the general formula

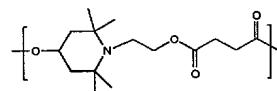


wherein X is oxygen; Y is hydrogen, hydroxyalkyl, aminoalkyl, or alkyl substituted

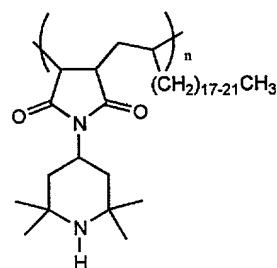
by both hydroxyl and amino groups, where the alkyl has up to about 20 carbon atoms on average; R⁶ and R⁷ are each independently selected from the group consisting of hydrogen, an alkyl group, an alkenyl group, or an arylalkyl group; R⁸, R⁹, R¹⁰, and R¹¹ are each independently selected from the group consisting of an alkyl group having 1 to about 6 carbon atoms, phenyl, an arylalkyl group, an aromatic heterocyclic group having 5 or 6 carbon atoms, and containing an oxygen, sulphur or nitrogen atom, or R⁸, R⁹, R¹⁰, and R¹¹ respectively, together or with the carbon atom to which they are attached are a C₅ to C₁₂ cycloalkyl group; Z is an oxy radical, an alkyl group, an alkenyl group, an alkoxyalkyl group, an arylalkyl group that is unsubstituted or which has one or more substituents in its aryl moiety; and R¹³ is hydrogen, an alkyl group, an ester, a carbonyl, an acyl group, an aliphatic acyl group, or a group represented by the formula -COOR¹⁵, or -OOCR¹⁵, wherein R¹⁵ is an alkyl group, a benzyl group, a phenyl group.

[c6]

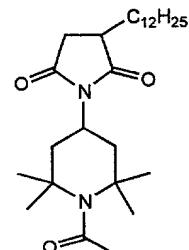
6. The composition of claim 5, wherein said hindered amine light stabilizer has the formula:



wherein n is on average greater than about 9, and less than about 12, by the formula:



wherein n is on average greater than about 4, and less than about 7, by the formula:



or a mixture comprising at least one of the foregoing hindered amine light

stabilizers.

- [c7] 7.The composition of claim 3, wherein said hindered amine light stabilizer is present in an amount greater than about 0.1% by weight, and less than about 10% by weight of the total weight of said upper layer.
- [c8] 8.The composition of claim 1, wherein said low volatility hydroxyphenyl-triazine or -pyrimidine UV absorber contains a 2,4,6-trisaryl-1,3,5-triazine moiety and a free hydroxyl group, or contains a 2,4,6-trisaryl-1,3-pyrimidine moiety and a free hydroxyl group.
- [c9] 9.The composition of claim 1, wherein said low volatility hydroxyphenyl-triazine or -pyrimidine UV absorber has the formula:
-
- or the formula:
-
- [c10] 10.The composition of claim 8, wherein said low volatility hydroxyphenyl-triazine or -pyrimidine UV absorber is present at a concentration greater than or equal to about 0.01% by weight, and less than or equal to about 10% by weight of said upper layer.
- [c11] 11.The composition of claim 1, wherein the substrate comprises polycarbonate.
- [c12] 12.The composition of claim 1, wherein the substrate is in the form of a film.
- [c13] 13.The composition of claim 1 having a a gloss measured at an angle of 60

degrees of more than about 60%, a change in gloss of less than about 20% 3000 hours of weathering according to the ISO4892-2A protocol , and a change in color of less than about 3 after 3000 hours of weathering according to the ISO4892-2A protocol.

- [c14] 14.The composition of claim 13 wherein the gloss is greater than about 70%, the change in gloss is less than about 15%, and the change in color is less than about 2.
- [c15] 15.The composition of claim 13, wherein the gloss is greater than about 80%, the change in gloss is less than about 10%, and the change in color is less than about 1.
- [c16] 16.The composition of claim 1 having a gloss measured at an angle of 60 degrees of more than about 75%, a change in gloss of less than about 15% after after heat aging at 80 ° C for three months, and a change in color of less than about 2 after heat aging at 80 ° C for three months.
- [c17] 17.The composition of claim 16 wherein the gloss is greater than about 80%, the change in gloss is less than about 10%, and the change in color is less than about 1.5.
- [c18] 18.The composition of claim 13, wherein the gloss is greater than about 85%, the change in gloss is less than about 5%, and the change in color is less than about 1.
- [c19] 19.A multilayer composition, comprising
an upper layer comprising
a polymer system consisting essentially of a cycloaliphatic polyester resin, and
an additive composition comprising a hindered amine light stabilizer and a low
volatility, hydroxyphenyl-triazine or -pyrimidine UV absorber;
an intermediate layer comprising
a polymer system consisting essentially of a cycloaliphatic polyester, and an
additive composition comprising TiO_2 , and optionally dyes, pigments, special
effects additives, or a combination thereof; and
a polycarbonate substrate layer, wherein said intermediate layer is disposed
between and in intimate contact with said upper layer and said substrate layer.

- [c20] 20. An article comprising the composition of claim 1.
- [c21] 21. An article comprising the composition of claim 12.
- [c22] 22. A method for the manufacture of a multilayer article, comprising blow molding a composition comprising blow molding the composition of claim 1.